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AUTHOR Drummond, Dorothy W.
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ABSTRACT

Geographic illiteracy is widespread in Indiana. In seeking a solution, it is necessary first to isolate the problem. It seems that the problem has come about in spite of rather than because of state curriculum guidelines. Geography has a strong role in the social studies curriculum of Indiana at every grade level from first through seventh. The systematic study of geography is weak at the high school level, but there are many courses offered in which geographic concepts can or should be integrated. It is likely that teacher training requirements in Indiana may be encouraging weakness in geography. Under the present licensing requirements, the state does not set down rigid specifications for certification, but instead offers guidelines to be worked out in programs offered by individual teacher training institutions. A survey of teacher training programs at 32 Indiana institutions of higher learning in 1985 indicated the probability that a majority of teachers in Indiana had little or no formal training in geography. It is clear that many teachers today face a curriculum with a heavy emphasis in geography without the foundation skills and understandings needed to maintain a comfort level in the classroom. Since teachers facing time constraints tend to emphasize subject matter in which they feel competent, it is understandable if geography is neglected. If geographic illiteracy is to be remedied in Indiana, a start must be made with teacher training. Study findings are presented in two tables and a chart. (JB)

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The Geography Gap in Teacher Training Programs:

A Stumbling Block to Internationalizing Indiana

Dorothy W. Drummond

Department of Social Sciences

St. Mary-of-the-Woods College

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A paper delivered at the Geography section of the Indiana Academy of the Social Sciences, Evansville, October 5, 1986

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Abstract

A search for the reasons underlying geographic illiteracy in Indiana has led to the finding that the curriculum in Indiana schools is strong in geographic concepts and skills but teacher certification requirements are weak in geography. Certification guidelines regarding geography are ambiguous, with the result that teachers can complete their training without having exposure to geography. A survey of the role of geography within teacher training institutions in Indiana indicates that it is possible, even probable, that a majority of elementary teachers and secondary social studies teacher have little exposure to geography.

The Geography Gap in Teacher Training Programs

There is a growing awareness in Indiana that geographic illiteracy is widespread.[1] Stories of high school students who cannot locate Chicago on a world map, or who place Iran in a location as unlikely as the Amazon basin, abound. But the truth is that many adults in our state are uneasy trying to interpret a road map, look at TV newscasts with little or no concept of where events occur, score lowest in the geography section of "Trivial Pursuit", and have no real understanding of the relationship of Indiana to the rest of the world. All of this is concurrent with the recognition at the state and corporate level that the well-being of Hoosiers has world-wide links.[2] Indiana taxpayers are being called upon to make decisions that will attract foreign capital to our state. Good decision-making requires an electorate that is geographically literate.

Obviously, geographic illiteracy must be redressed in Indiana. But in seeking the solution, it is necessary to first isolate the problem. Does the problem lie within the education system? This paper examines the curriculum in Indiana schools, and the training of teachers in geography. It concludes that the curriculum is strong in geographic concepts, but the training of teachers in these concepts is a point of weakness in Indiana's educational delivery system.

Geography in the Curriculum

It would seem that geographic illiteracy in Indiana has come about in spite of, and not because of, state curriculum guidelines. Geography has a strong role in the social studies curriculum in Indiana at every grade level from first through seventh.[3] The Course and Curriculum Area Descriptions for Indiana Schools, issued in 1985 by the Division of Curriculum of the Indiana Department of Public Instruction, include the following geography components in elementary and junior high social studies:

Grade 1: Comparisons between community group and groups in the world; using directions; interpreting map legends.

Grade 2: Neighborhood community and interdependence with other communities; reading maps and graphs; relating community to state, nation, and world.

Grade 3: Communities and regions in the world: map and globe skills.

Grade 4: Indiana history and geography; states and regions in the United States and the world, showing interdependence; map and globe skills.

Grade 5: United States, with comparative studies of other world regions; influence of geography on United States history; communication, transportation, trade; map and globe skills.

Grade 6: Other world cultures. Options: Latin America, Canada, Western Europe, or other world regions; influence of cultures, economic interdependence; geographical influence on culture; interaction of modern cultures.

Grade 7: Global studies. Current events. Extension of geography skills

Along with the interrelations of place and people, elementary and junior high social studies curriculum guides place a strong emphasis on map-reading and other skills.

Physical geography, termed "earth science" is a strong part of the science curricula in the elementary and junior high programs. The curriculum guides for grades one through three include "natural and man-made environments relating to...the earth, space, and weather", and call for "observing, classifying, measuring, identifying basic space/time relationships". Grades four through six build further on these concepts and skills, and call for "a balance of physical, earth, and life-science concepts." Skills emphasized at this level include using and interpreting graphs, charts, tables, diagrams, and maps. Grades seven and eight begin specific area-oriented sciences, including earth/space science.

The systematic study of geography is weak at the high school level, but there are many courses offered in which geographic concepts can or should be integrated. Two years of social studies are required by the state for graduation, one year of which must be American History, and a half year of which must be government. Some school districts require three years of social studies. Thus the student must select at least one semester, and possibly three, from a variety of elective social studies course. In a recent semester, only about 3.5 percent of Indiana high school students were studying a social studies course titled "Geography"; but nearly 70 percent were enrolled in courses which had the potential for frequent utilization of geographic skills and concepts.[4] These included a wide range of titles, led in enrollment by U. S. History, World History, and Economics.

High school science programs, as detailed in the state curriculum guide, include concepts from physical geography within General Science,

Applied Science, and Earth/Space Science courses, plus specific courses in Astronomy, Geology, Meteorology, Oceanography, and Soil Science. A specific course titled "Physical Geography" does not appear in the Course and Area Descriptions for Indiana Schools.

To summarize curriculum considerations, geography occupies a strong place in the elementary and junior high school program in Indiana, and the framework is in place for strength in geography within the secondary curriculum. Why, then, are Indiana schools turning out students who are largely illiterate in geography?

Teacher Training in Geography

It is likely that teacher training requirements in Indiana may be encouraging weakness in geography, due to in part to ambiguity. Under the present licensing requirements, essentially in effect since 1962 and amended most recently in 1984, the state does not lay down rigid specifications for certification.[5] Instead, it offers guidelines to be worked out in programs offered by individual teacher training institutions. To gain state approval, these programs must fall within the general guidelines. (In addition, teachers who hold valid certifications from other states may be certified in Indiana if their training falls within these guidelines.)

A survey of teacher training programs at 32 institutions of higher learning in Indiana was undertaken in the fall of 1985.[6] A summary of the findings from this survey indicates the possibility-- even probability-- that a majority of teachers in Indiana have had little or no formal training in geography (Table 1).

GEOGRAPHY AS A GENERAL EDUCATION COMPONENT IN INDIANA TRAINING PROGRAMS FOR ELEMENTARY TEACHERS AND SECONDARY SOCIAL STUDIES TEACHERS

R Required; O Option; N Not Available

	Grads/Yr (Av. 1982-1985)		Elementary (1-6)						Secondary Social Studies (7-12)					
	El Ed	Sec Soc St	Social Science			Science			Social Science			Science		
			R	O	N	R	O	N	R	O	N	R	O	N
Institutions	32	30	7	9	16	13	10	9	4	16	10	4	13	13
Percent			22	28	50	41	31	28	13	54	33	13	44	43
Graduates/Yr	1292	249	138	496	658	538	579	175	14	173	62	23	166	61
Percent			11	38	51	42	45	13	6	69	25	9	67	24

TABLE 1

In general, elementary teachers have a greater chance of having had training in geography than do secondary social studies teachers. And exposure to geography is more likely to have come as a physical science than as a social science.

Geography in Indiana's Elementary Teacher-Training Program

In the elementary program, the guidelines for general education in the social sciences provide that programs shall be "designed to develop understanding of contemporary civilization, economics, government, current social problems, and modern family life and shall always include a course in U. S. History and a course in world civilization. An integrated approach shall be used wherever possible."[7] The certification guidelines do not specifically mention geography or require training in geography, and to this extent they may be at the heart of the confusion which marks the role of geography in teacher education. Whereas geography is particularly strong in the

elementary social studies curriculum , the status of geography in teacher certification regulations is vague and open to differing interpretations.

The situation regarding geography in the elementary science guidelines, on the other hand, is more clearly defined. The science guidelines in the elementary program specifically mention conservation and earth science, both of which have strong physical geography underpinnings: "Programs shall be designed to develop broad functional understanding of conservation and the physical, biological, and earth sciences. An integrative approach shall be used wherever possible." The specific mention of earth sciences would account for the fact that it is far more likely that elementary education students will have had training in physical geography than in cultural geography.

Forty-two percent of recently graduated elementary teachers attended institutions where at least one course in physical geography is required, and an additional 45 percent attended institutions where physical geography is offered as an option (Table 1). Only 13 percent had no opportunity to take a physical geography course. But the situation is quite different regarding cultural geography. Eleven percent were required to take a cultural geography course, thirty-eight had an option to take it, but fifty-one percent attended institutions where no course in cultural geography was offered. From the above, it may be assumed that a majority of elementary teachers now being graduated in Indiana are facing the strong geography orientation in the social studies curriculum with inadequate training in geography.

Geography in Indiana's Secondary Social Studies Training Program

Prospects for adequate preparation in geography are not high among those who will teach social studies in junior and senior high schools. Because geography is widely taught at the Seventh Grade level, in courses variously labeled "social studies", "world cultures", "global studies", or "world geography", the level of teacher preparation in geography is of particular interest. General education requirements laid down by the state for those who wish to be certified to teach social studies in junior high school include a physical geography option (among several other subjects) for science credit and a cultural geography option (among several other subjects) for social science credit.[8] A social studies subject matter concentration requires 18-24 hours in the social studies, and "every effort shall be made to use an interdisciplinary approach to study economics, U. S. history, world civilization, geography, government, and current social problems." The guidelines clearly mandate the study of geography, but not necessarily within a separate course. How this mandate is carried out varies widely among institutions, but most do not require a separate course in geography. For those who would teach social studies in senior high school a specialized social studies major offers geography as one option among eight for primary or supporting area concentration. Thus specialized training may but does not have to include geography.[9]

What kind of exposure to geography will secondary social science education graduates have had in their training programs? Table 1 indicates that few will have attended institutions where either physical or cultural geography is required. For the majority, geography will have been offered

as an option, with cultural geography and physical geography about equally likely. But one- fourth will have attended institutions where no geography was offered.

Summary of Findings

A composite picture of geography training in Indiana can be gained by combining all geography course offerings at teacher training institutions, without reference to designation as a physical or social science. This composite picture appears as Table 2 , and in graphic form as Figure 1. Categories in the table were combined to arrive at the summary graph.

The Role of Geography in Programs of
Teacher Training Institutions in Indiana

	Elementary			Secondary Social Studies		
	Institutions	Graduates	%	Institutions	Graduates	%
2 Courses Required	4	90	7	2	7	3
1 Course Required, Additional Course Optional	5	129	10	3	15	6
1 Course Required	8	400	31	1	8	3
2 Courses Optional	5	374	29	10	141	57
1 Course Optional	4	198	15	6	41	16
No Geography Course Available	6	101	8	8	37	15
Totals	32	1292	100	30	249	100

Note: Includes both physical and cultural geography.

Table 2

POTENTIAL EXPOSURE TO GEOGRAPHY COURSES AMONG
TEACHERS TRAINED IN INDIANA

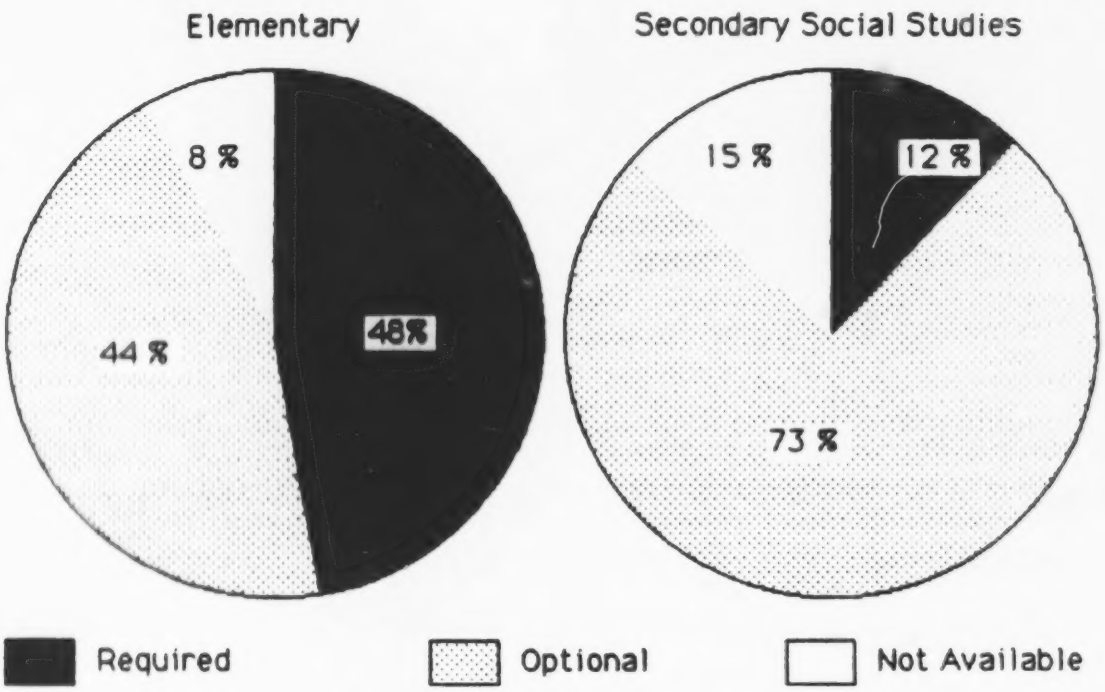

Figure 1

It is clear that training of teachers in geography in Indiana does not match the tasks which the curriculum assigns. Among recent graduates of Indiana teacher training institutions, a small but significant percent of both elementary teachers and secondary social studies teachers had no opportunity to study geography in their institutions. Less than half of elementary teachers and only one-eighth of secondary social studies teachers attended institutions where at least one geography course was

required. Almost half of the elementary teachers and nearly three-fourths of the secondary social studies teachers had the option to choose geography. But whether they exercised this option will have depended in part on the advice they received. Some institutions report that "students almost never choose an option in geography," while others indicate that students are strongly urged to take geography. It often depends on the perceptions of the academic advisor. Many persons now in advisory positions in schools of education have been trained during the period since 1962 when geography ceased to be required; they may themselves have had little or no exposure to geography and thus have no particular bias toward the subject.

Toward a Remedy

It is clear that many teachers today are facing a curriculum heavy in geography without the foundation skills and understandings needed to maintain a comfort level in the classroom. Given time constraints, teachers tend to emphasize subject matter in which they feel most competent. If geography is neglected in the classroom, the cause is understandable. It would seem that if geographic illiteracy is to be remedied in Indiana, a start must be made with teacher training. The precedent has been set. Certain courses are now mandated in the otherwise non-specific general education requirements of the state of Indiana. For elementary teachers these include nine semester hours of oral and written expression, a course in United States history, and a course in world civilization.[10] The Geography Educators Network in Indiana (GENI) has recommended that a course in physical geography and a course in world regional geography also be mandated for all who would teach elementary school, and all who would teach social studies

in junior high and high school. Further, it has recommended that those persons now teaching without this minimal amount of preparation in geography be urged to make up their deficiencies through continuing education. These recommendations were made to the Indiana Teacher Education and Licensing Advisory Committee, and they are under consideration.[11]

References

[1] See, for example, Price, Nelson. (1984, May 7). Geography: Where Schools Stumble. Indianapolis News; also Drummond, D. W. (1985, Winter). On the Map: A Concern About Geography. St. Mary-of-the-Woods Quarterly, pp. 8-9.

[2]Christenberry, Donna.(1986, September 18) Importance of Coping in Foreign Marketplace Now a High Priority. . Terre Haute Tribune-Star, p. 1.

[3]Division of Curriculum, Indiana Department of Public Instruction. (1985). Course and Curriculum Area Descriptions for Indiana Schools. Indianapolis, pp. 25-31, 51-53, 56, 60-61.

[4]Division of Educational Information and Research, Indiana Department of Public Instruction. (1984). Annual Fall School Report: First Semester 1983-84 Indianapolis.

[5]Title 530: Commission on Teacher Training and Licensing. (1984, August 1). LSA Document No. 84-27(F). Indiana Register. Vol. 7. No. 9.

[6]Data from this survey are available from the author upon request.

[7]Title 530, pp. 1827-28.

[8]Title 530, p. 1829.

[9]Title 530, p. 1848.

[10]Title 530, p. 1827-28.

[11]Letter and supporting documents (1985, September 28) from the author, representing the Geography Educators Network in Indiana, to the Indiana Teacher Education and Licensing Advisory Committee. Testimony before the committee followed. (1986, February).